

Quiz 7

Name: _____

1. Let $\mathbf{F}(x, y) = (2x - 3y)\mathbf{i} + (4y - 3x - 8)\mathbf{j}$. Find a function $f(x, y)$ such that $\mathbf{F} = \nabla f$. Show your work.

2. Evaluate line integral $\int_C (2y - e^x)dx + (5x + e^{-y})dy$, where C is the top half of circle $x^2 + y^2 = 25$.